



Smart Software Solutions
for Embedded Success

RTUSB-OEM

Real-Time USB Host Protocol Stack

Features

- Runs on any CPU
- Supports multi-threaded or polled mode environment
- Supports USB versions 1.1 and 2.0
- Supports UHCI, OHCI, and EHCI Host Controllers
- Supports 12 Mb/s and 480 MB/s transfer rates
- No Copy
- Extreme Portability
- 100% 'C' Source code
- Comprehensive documentation
- Simple API
- Small footprint
- Instructive Demos included

EBSnet RTUSB-OEM is a Universal Serial Bus (USB) host protocol stack for embedded systems. It contains the core protocol stack, the required host controller device drivers, a low-level communication API and high-level class drivers. RTUSB-OEM provides the flexibility to be run in a single-threaded, multi-threaded or a polled mode environment. RTUSB-OEM is a comprehensive, truly portable high performance USB stack designed specifically for embedded systems.

FUNCTIONALITY HIGHLIGHTS:

RTUSB-OEM supports both USB versions, 1.1 and 2.0. The protocol stack provides support for all major USB host controller types, including UHCI, OHCI, and EHCI based controllers.

RTUSB-OEM supports transfer rates of up to 12 Mb/s on USB 1.1 and 480 Mb/s on USB 2.0 buses, using low-, full-, or high-speed data transfers. All USB data transfer types (control, bulk, interrupt, and isochronous) can be used to support devices with both high throughput and real-time transfer requirements. RTUSB-OEM does not require data to be copied while being transferred. Data transfers are performed by DMA directly to/from the application's buffer.

RTUSB-OEM performs I/O in the background by providing applications with the capability to start the I/O operations while performing other tasks. The status of this I/O transaction can be queried at a later time.

Class Drivers

RTUSB-OEM comes with high-level class drivers for keyboards, mice, touch screens, printers and mass storage devices (disks, memory sticks, digital cameras, CD-ROMs, DVDs, etc.). A hub class driver is integrated in the core USB protocol stack. The class driver layer is abstracted from the protocol stack for ease of use and portability.

Extreme Portability

RTUSB-OEM is designed to be easily ported to any platform. All OS and file system dependent code is abstracted into a configuration file. This provides the application programmer with an easy-to-use interface for porting any system dependent I/O, memory management, and/or interrupt handling features.

Minimum Requirements: Any operating system and any file system for a mass storage device driver.